



STIC Search Report

EIC 1700

STIC Database Tracking Number: 205259

TO: Rip A Lee
Location: Remsen 10a24
Art Unit : 1713
October 25, 2006
Phone: 571-272-1104
Serial Number: 10 / 524216

From: Jan Delaval
Location: EIC 1700
Remsen 4a30
Phone: 571-272-2504

jan.delaval@uspto.gov

Search Notes

SEARCH REQUEST FORM**Scientific and Technical Information Center**

Requester's Full Name: LEE, RJP A. Examiner #: 78680 Date: October 11, 2006
 Art Unit: 1513 Phone Number 302 1104 Serial Number: 10/524,216
 Mail Box and Bldg/Room Location: DM 10A24 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: AQUEOUS POLYMER DISPERSIONS

Inventors (please provide full names): please see Sidiography, attachment

Earliest Priority Filing Date: AUG 29, 2002

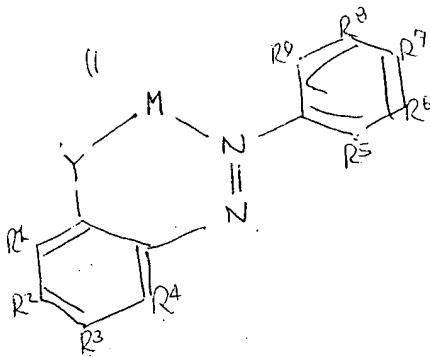
SCIENTIFIC REFERENCE BR
Sci & Tech Inf. Ctr.

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

OCT 20 2006 REC'D

Pat. & T.M Office

Please search for compounds of formula



- M is $\text{C}_6\text{H}_5\text{CO}$
- Y is O, N
- at least one of R^1-R^4 is



Z is SO_3H , SO_3Na

NO_2
F
 CF_3

please contact me if you have
questions or need to
refine search strategy

| STAFF USE ONLY | | Type of Search | Vendors and cost where applicable |
|------------------------------|-----------------|-----------------------|--|
| Searcher: | <u>DR</u> | NA Sequence (#) | STN <input checked="" type="checkbox"/> |
| Searcher Phone #: | <u>22504</u> | AA Sequence (#) | Dialog _____ |
| Searcher Location: | | Structure (#) | Questel/Orbit _____ |
| Date Searcher Picked Up: | <u>10/26/04</u> | Bibliographic | Dr. Link _____ |
| Date Completed: | <u>10/26/06</u> | Litigation | Lexis/Nexis _____ |
| Searcher Prep & Review Time: | | Fulltext | Sequence Systems _____ |
| Clerical Prep Time: | <u>15</u> | Patent Family | WWW/Internet _____ |
| Online Time: | <u>+ 30</u> | Other | Other (specify) _____ |

=> fil reg

FILE 'REGISTRY' ENTERED AT 16:06:32 ON 25 OCT 2006
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 24 OCT 2006 HIGHEST RN 911193-70-9
 DICTIONARY FILE UPDATES: 24 OCT 2006 HIGHEST RN 911193-70-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

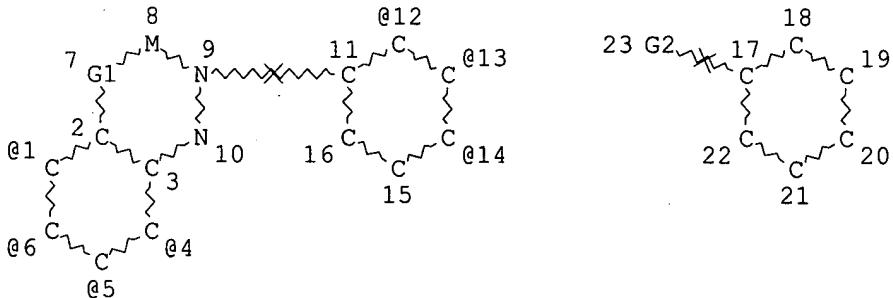
TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

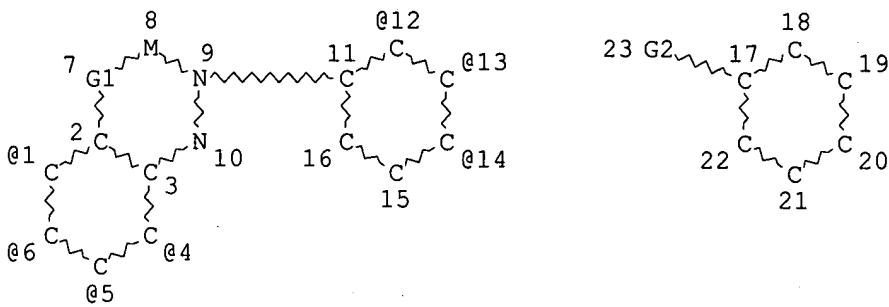
=> d sta que 130
 L24 STR



VAR G1=O/N/P
 VAR G2=1/6/5/4/12/13/14
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 23

STEREO ATTRIBUTES: NONE
 L26 625 SEA FILE=REGISTRY SSS FUL L24
 L28 STR



VAR G1=O/N/P
VAR G2=1/6/5/4/12/13/14

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 23

STEREO ATTRIBUTES: NONE

L30 24 SEA FILE=REGISTRY SUB=L26 SSS FUL L28

100.0% PROCESSED 58 ITERATIONS
SEARCH TIME: 00.00.01

24 ANSWERS

=> d his

(FILE 'HOME' ENTERED AT 15:38:58 ON 25 OCT 2006)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 15:39:10 ON 25 OCT 2006

| | |
|----|---|
| L1 | 1 S US20050250920/PN OR (US2005-524216# OR WO2003-EP8091 OR DE200 |
| | E CHOWDHRY/AU |
| | E CHOWDHRY M/AU |
| L2 | 27 S E5-E7 |
| | E MUBARIK/AU |
| | E MAHMOOD/AU |
| | E MAHMOOD C/AU |
| | E MAHMOOD M/AU |
| L3 | 28 S E3 |
| | E SCHMID/AU |
| | E SCHMID/AU |
| L4 | 9 S E3 |
| | E SCHMID M/AU |
| L5 | 526 S E3-E15, E30-E32 |
| | E PREISHUBER/AU |
| L6 | 27 S E4, E7-E12 |
| | E PREISHUEBER/AU |
| | E PFLUGL/AU |
| | E SAVA/AU |
| | E SAVA X/AU |
| L7 | 23 S E4 |
| | E WEISS/AU |

L8 17 S E3
 E WEISS H/AU
 L9 624 S E3-E19
 E WEISS HORST/AU
 L10 67 S E3
 E WEISS HOERST/AU
 E MECKING/AU
 L11 95 S E24,E27,E28
 E ZUIDEVELD/AU
 L12 21 S E7-E9
 E BAUERS/AU
 L13 18 S E5-E7
 L14 63 S L2-L13 AND BASF?/PA,CS
 E GROUP VII/CT
 E E16+ALL
 L15 8085 S E13+OLD,NT
 E GROUP VIII/CT
 E E35+ALL
 L16 172470 S E13+OLD,NT
 E GROUP VII/CT
 L17 1124 S GROUP VIIB?/CT
 L18 7115 S GROUP VIII?/CT
 L19 44 S L1-L14 AND L15-L18
 L20 17 S L14 AND L19
 L21 90 S L1,L14,L19,L20

FILE 'REGISTRY' ENTERED AT 15:47:24 ON 25 OCT 2006

FILE 'HCAPLUS' ENTERED AT 15:47:24 ON 25 OCT 2006
 L22 TRA L21 1- RN : 793 TERMS

FILE 'REGISTRY' ENTERED AT 15:47:27 ON 25 OCT 2006
 L23 793 SEA L22
 L24 STR
 L25 3 S L24
 L26 625 S L24 FUL
 SAV TEMP L26 LEE524/A
 L27 0 S L23 AND L26
 L28 STR L24
 L29 1 S L28 SAM SUB=L26
 L30 24 S L28 FUL SUB=L26
 SAV L30 TEMP LEE524A/A
 E A/PG
 L31 11 S E19,E20 AND L30
 L32 601 S L26 NOT L30
 L33 24 S E19,E20 AND L32
 L34 35 S L31,L33
 L35 35 S L26 AND (MN OR TC OR RE OR FE OR RU OR OS OR CO OR RH OR IR O
 L36 35 S L34,L35
 L37 13 S L30 NOT L36
 L38 577 S L26 NOT L36,L37

FILE 'HCAPLUS' ENTERED AT 15:55:53 ON 25 OCT 2006
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 L40 242 S L38
 L41 0 S L39 AND L1-L14
 L42 0 S L40 AND L1-L14
 L43 0 S L39 AND BASF?/PA,CS
 L44 2 S L40 AND BASF?/PA,CS
 E OLEFIN/CT

L45 E E15+ALL
 5704 S E2+OLD, NT
 E OLEFIN/CT
 E E18+ALL
 L46 105 S E3+OLD
 E OLEFINIC/CT
 E E10+ALL
 L47 24289 S E1
 E E2+ALL
 L48 510092 S E7+NT
 E E8
 L49 5404 S E42-E55
 E POLYOLEFIN/CT
 E POLYOLEFINS/CT
 E E3+ALL
 L50 588150 S E8+OLD, NT
 E E123+ALL
 L51 10714 S E4+OLD, NT
 L52 2 S L39 AND L45-L51
 L53 20 S L40 AND L45-L51
 SEL RN L1

FILE 'REGISTRY' ENTERED AT 16:02:15 ON 25 OCT 2006

L54 9 S E1-E9
 L55 1 S L54 AND CCS/CI

FILE 'HCAPLUS' ENTERED AT 16:04:38 ON 25 OCT 2006

L56 3 S L30
 L57 1 S L55
 L58 1 S L56,L57 AND L1-L14
 L59 1 S L56,L57 AND BASF?/PA,CS
 L60 2 S L56-L59 AND L45-L51
 L61 3 S L56-L60 AND (PY<=2002 OR PRY<=2002 OR AY<=2002)
 L62 1 S L56,L56 NOT L61

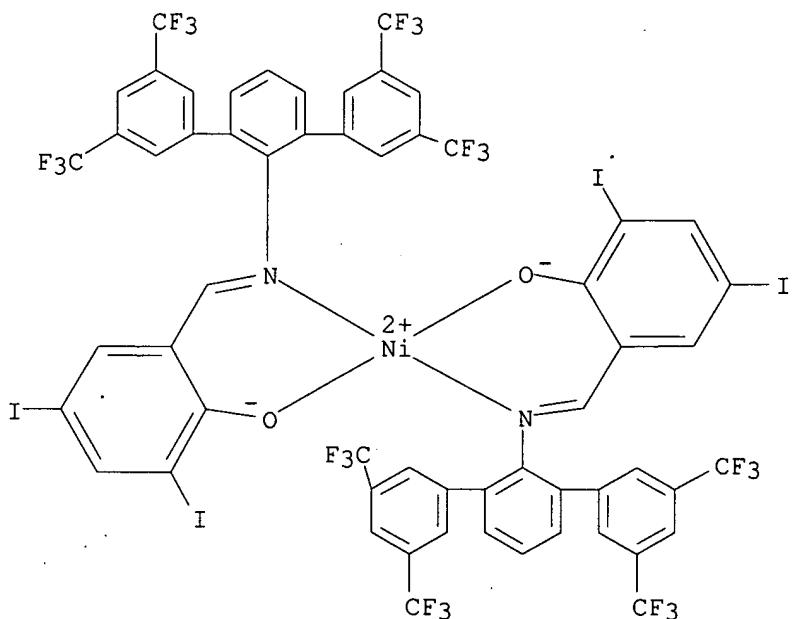
FILE 'USPATFULL' ENTERED AT 16:06:18 ON 25 OCT 2006

L63 2 S L30 OR L55

FILE 'REGISTRY' ENTERED AT 16:06:32 ON 25 OCT 2006

=> d ide can 155

L55 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 667938-71-8 REGISTRY
 ED Entered STN: 26 Mar 2004
 CN Nickel, bis[2,4-diido-6-[[[3,3'',5,5''-tetrakis(trifluoromethyl)[1,1':3',
 1''-terphenyl]-2'-yl]imino-κN]methyl]phenolato-κO]- (9CI) (CA
 INDEX NAME)
 MF C58 H24 F24 I4 N2 Ni O2
 CI CCS
 SR CA
 LC STN Files: CA, CAPLUS, USPATFULL



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:236209

=> fil uspatfull

FILE 'USPATFULL' ENTERED AT 16:06:52 ON 25 OCT 2006

CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 24 Oct 2006 (20061024/PD)
 FILE LAST UPDATED: 24 Oct 2006 (20061024/ED)

HIGHEST GRANTED PATENT NUMBER: US7127745

HIGHEST APPLICATION PUBLICATION NUMBER: US2006236437

CA INDEXING IS CURRENT THROUGH 24 Oct 2006 (20061024/UPCA)

ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 24 Oct 2006 (20061024/PD)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2006

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2006

=> d bib abs hitstr tot 163

L63 ANSWER 1 OF 2 USPATFULL on STN

AN 2005:287654 USPATFULL

TI Preparation of aqueous polymer dispersions

IN Chowdhry, Mubarik Mahmood, Strasbourg, FRANCE

Schmid, Markus, Deidesheim, GERMANY, FEDERAL REPUBLIC OF

Preishuber-Pflugl, Peter, Ludwigshafen, GERMANY, FEDERAL REPUBLIC OF

Sava, Xavier, Mannheim, GERMANY, FEDERAL REPUBLIC OF

Weiss, Horst, Neuhofen, GERMANY, FEDERAL REPUBLIC OF

Mecking, Stefan, Freiburg, GERMANY, FEDERAL REPUBLIC OF

Zuiderveld, Martin, Freiburg-Tiengen, GERMANY, FEDERAL REPUBLIC OF

Bauers, Florian M., Freiburg, GERMANY, FEDERAL REPUBLIC OF

PI US 2005250920 A1 20051110

AI US 2003-524216 A1 20030724 (10)

WO 2003-EP8091

20030724

20050210 PCT 371 date

PRAI DE 2002-10240577

20020829

DT Utility

FS APPLICATION

LREP OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C., 1940 DUKE STREET,
ALEXANDRIA, VA, 22314, US

CLMN Number of Claims: 20

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 1159

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for preparing aqueous polymer dispersions by polymerizing one or more olefins in an aqueous medium in the presence of dispersants and, if desired, of organic solvents comprises catalyzing the polymerization of said olefin(s) using one or more metal complex compounds of the formula I ##STR1## where at least one of the radicals R.sup.1 to R.sup.9 is necessarily in the form of a radical of the formula II below ##STR2## where Z is an electron-withdrawing group and n is an integer from 1 to 5.

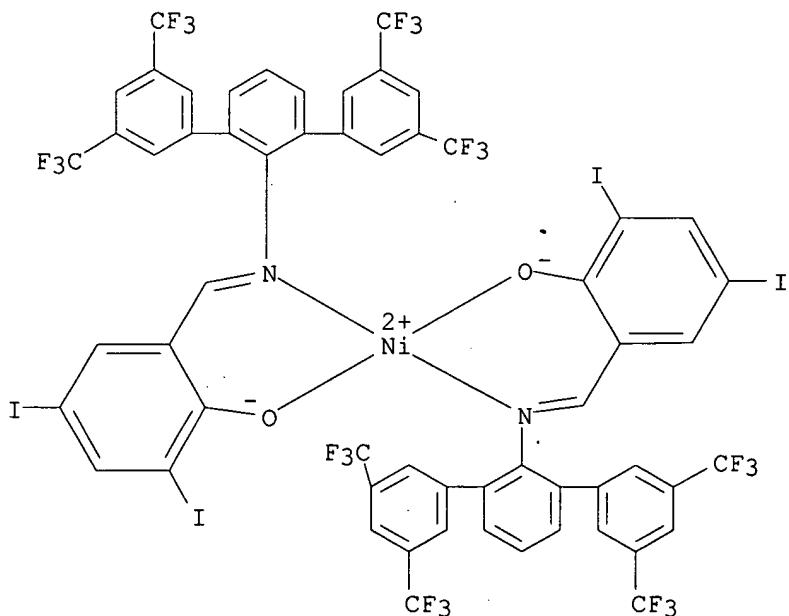
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 667938-71-8P

(production of aqueous polyolefin dispersions by polymerization of olefins in presence

of transition metal complexes of azo or azomethine compds.)

RN 667938-71-8 USPATFULL

CN Nickel, bis[2,4-diido-6-[[[3,3'',5,5''-tetrakis(trifluoromethyl)[1,1':3',
1''-terphenyl]-2'-yl]imino-κN]methyl]phenolato-κO]- (9CI)
(CA INDEX NAME)

L63 ANSWER 2 OF 2 USPATFULL on STN

AN 2004:240192 USPATFULL

TI Monometallic azo complexes of late transition metals for the

IN polymerization of olefins
 Weiss, Thomas, Mannheim, GERMANY, FEDERAL REPUBLIC OF
 PI US 2004186007 A1 20040923
 US 7098165 B2 20060829
 AI US 2004-768291 A1 20040130 (10)
 PRAI DE 2003-10304158 20030203
 DT Utility
 FS APPLICATION
 LREP BAYER MATERIAL SCIENCE LLC, 100 BAYER ROAD, PITTSBURGH, PA, 15205
 CLMN Number of Claims: 17
 ECL Exemplary Claim: 1
 DRWN No Drawings
 LN.CNT 1541

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to compounds of transition metals with azo ligands, a process for their production, the use of these compounds as catalysts, a process for olefin (co)polymerization using these compounds, reaction products of these compounds with co-catalysts, the olefin (co)polymer, the use of these olefin (co)polymers for the production of molded parts, as well as molded parts that are produced from the olefin (co)polymers.

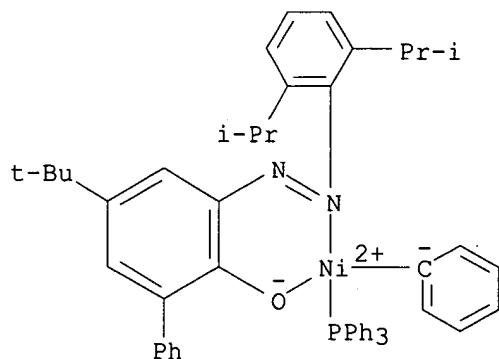
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 732286-00-9P

(preparation of monometallic azo complexes of late transition metals for the polymerization of olefins)

RN 732286-00-9 USPATFULL

CN Nickel, [3-[2,6-bis(1-methylethyl)phenyl]azo- κ N2]-5-(1,1-dimethylethyl)[1,1'-biphenyl]-2-olato- κ O]phenyl(triphenylphosphine)- (9CI) (CA INDEX NAME)



=> fil hcaplus

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FILE COVERS 1907 - 25 Oct 2006 VOL 145 ISS 18
FILE LAST UPDATED: 24 Oct 2006 (20061024/ED)

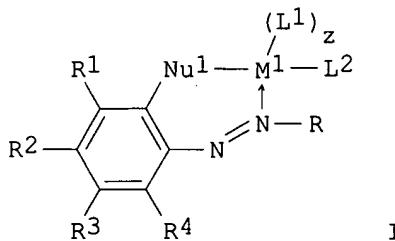
New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 162 bib abs hitstr retable

L62 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:631256 HCAPLUS
 DN 141:174614
 TI Monometallic azo complexes of late transition metals for the polymerization of olefins
 IN Weiss, Thomas
 PA Bayer AG, Germany
 SO Ger. Offen., 25 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|------------------|----------|
| PI | DE 10304158 | A1 | 20040805 | DE 2003-10304158 | 20030203 |
| | EP 1454926 | A1 | 20040908 | EP 2004-1164 | 20040121 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| | CA 2456518 | AA | 20040803 | CA 2004-2456518 | 20040130 |
| | US 2004186007 | A1 | 20040923 | US 2004-768291 | 20040130 |
| | US 7098165 | B2 | 20060829 | | |
| | JP 2004238395 | A2 | 20040826 | JP 2004-25253 | 20040202 |
| PRAI | DE 2003-10304158 | A | 20030203 | | |
| OS | MARPAT 141:174614 | | | | |
| GI | | | | | |



AB The title azo complexes have the formula I, where Nu1 = O, S, Se, PRa, NRa or COO; Ra = H, alkyl or aryl group; R, R1, R2, R3 and R4 = H, halogen, substituted or unsubstituted C1-8 alkyl, C2-8 alkenyl, C3-12 cycloalkyl, C7-13 arylalkyl or C6-14 aryl group; M1 = a group 4-12 element, such as Ti, Zr, Cr, V, Fe, Co, Ni, Pd, Cu or Zn; L1 = a neutral ligand, such as

IT PPh₃; L₂ = an anionic ligand, such as Me, Ph and z = 1-2. The complexes can be used as catalysts for (co)polymerization of olefins and polar olefins.

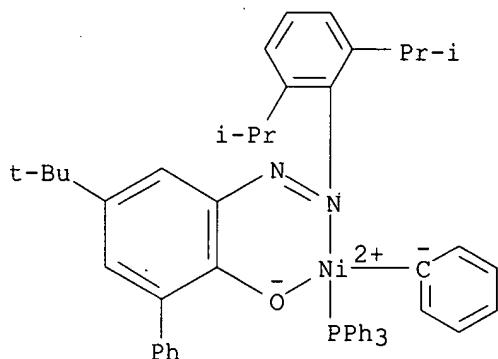
732286-00-9P

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(preparation of monometallic azo complexes of late transition metals for the polymerization of olefins)

RN 732286-00-9 HCAPLUS

CN Nickel, [3-[[2,6-bis(1-methylethyl)phenyl]azo- κ N₂]-5-(1,1-dimethylethyl)[1,1'-biphenyl]-2-olato- κ O]phenyl(triphenylphosphine)- (9CI) (CA INDEX NAME)



=> d 161 bib abs hitind hitstr retable tot

L61 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:198241 HCAPLUS

DN 140:236209

TI Procedure for the production of aqueous polymer dispersions by polymerization of olefins in the presence of transition metal complexes

PA BASF A.-G., Germany

SO Ger. Offen., 18 pp.

CODEN: GWXXBX

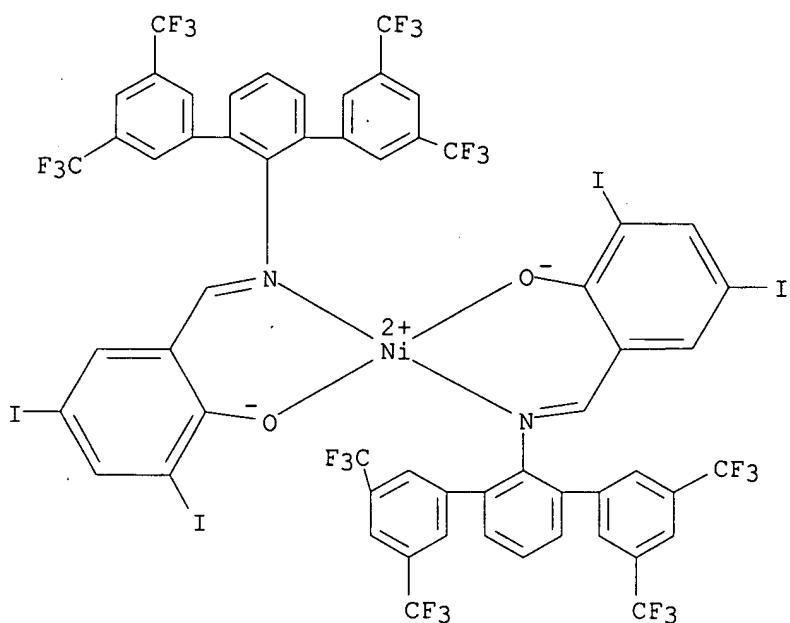
DT Patent

LA German

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---|------|----------|------------------|--------------|
| PI | DE 10240577 | A1 | 20040311 | DE 2002-10240577 | 20020829 <-- |
| | WO 2004020478 | A1 | 20040311 | WO 2003-EP8091 | 20030724 <-- |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU | 2003250152 | A1 | 20040319 | AU 2003-250152 | 20030724 <-- |
| EP | 1537150 | A1 | 20050608 | EP 2003-790811 | 20030724 <-- |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | | |

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
 JP 2005536609 T2 20051202 JP 2004-531814 20030724 <--
 US 2005250920 A1 20051110 US 2005-524216 20050210 <--
 PRAI DE 2002-10240577 A 20020829 <--
 WO 2003-EP8091 W 20030724 <--
 OS MARPAT 140:236209
 AB Aqueous polymer dispersions are manufactured by polymerization of olefins in the presence
 of complexes of Group 7-10 metals and azo or azomethine compds. having aromatic rings attach to both ends of the azo or azomethine group. A typical catalyst was manufactured by reaction of 2,6-bis[3,5-bis(trifluoromethyl)phenyl]aniline with 3,5-diiodo-2-hydroxybenzaldehyde and complexation of the resulting salicylaldimine ligand with tetramethylethylenediaminedimethylnickel.
 IC ICM C08F0004-06
 ICS C08F0004-26; C08F0002-16; C08F0010-00
 CC 35-3 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 67
 IT **Polyolefins**
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (production of aqueous polyolefin dispersions by polymerization of olefins in presence
 of transition metal complexes of azo or azomethine compds.)
 IT **667938-71-8P**
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
 USES (Uses)
 (production of aqueous polyolefin dispersions by polymerization of olefins in presence
 of transition metal complexes of azo or azomethine compds.)
 IT **9002-88-4P**, Polyethylene
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (production of aqueous polyolefin dispersions by polymerization of olefins in presence
 of transition metal complexes of azo or azomethine compds.)
 IT **667938-71-8P**
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
 USES (Uses)
 (production of aqueous polyolefin dispersions by polymerization of olefins in presence
 of transition metal complexes of azo or azomethine compds.)
 RN 667938-71-8 HCAPLUS
 CN Nickel, bis[2,4-diido-6-[[[3,3'',5,5''-tetrakis(trifluoromethyl)[1,1':3',1''-terphenyl]-2'-yl]imino-κN]methyl]phenolato-κO]- (9CI) (CA
 INDEX NAME)



IT 9002-88-4P, Polyethylene

RL: IMF (Industrial manufacture); PREP (Preparation)

(production of aqueous polyolefin dispersions by polymerization of olefins
in presence

of transition metal complexes of azo or azomethine compds.)

RN 9002-88-4 HCPLUS

CN Ethene, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 74-85-1

CMF C2 H4

$\text{H}_2\text{C}=\text{CH}_2$

L61 ANSWER 2 OF 3 HCPLUS COPYRIGHT 2006 ACS on STN

AN 2001:47871 HCPLUS

DN 134:231136

TI Polymetallic complexes, part LXXIII: complex of $\text{Co}(\text{II})$, $\text{Ni}(\text{II})$, $\text{Cu}(\text{II})$, $\text{Zn}(\text{II})$, $\text{Cd}(\text{II})$, $\text{Hg}(\text{II})$, $\text{Mn}(\text{II})$ and $\text{Fe}(\text{II})$ with NOON donor bis-bidentate chelating azo dye ligands

AU Mahapatra, Bipin Bihari; Sendha, R. K.

CS Department of Chemistry, G.M. Autonomous College, Sambalpur, 768 004, India

SO Asian Journal of Chemistry (2000), 12(4), 1061-1066
CODEN: AJCHEW; ISSN: 0970-7077

PB Asian Journal of Chemistry

DT Journal

LA English

OS CASREACT 134:231136

AB Sixteen dinuclear metal complexes $[\text{M}_2(\text{L/L}')\text{Cl}_2(\text{H}_2\text{O})_6]$ and $[\text{M}'_2(\text{L/L}')\text{Cl}_2(\text{H}_2\text{O})_2]$ were synthesized, where $\text{LH}_2 = 3,3'$ -di-(phenylazo)-di-

β -naphthol, L'H2 = 3,3'-di-(p-sulfonatophenylazo)-di- β -naphthol, M = Mn(II), Fe(II), Co(II), Cu(II), Zn(II) and M' = Ni(II), Cd(II), Hg(II). The complexes of the former category are either octahedral or distorted octahedral. The Ni(II) complexes are square planar whereas Cd(II) and Hg(II) complexes possess a tetrahedral geometry around the metal ions. The characterization of ligands and the complexes is made based upon anal., conductance, magnetic susceptibility, IR, electronic, NMR and ESR spectra and x-ray data. Both the azo dyes behave as bis-bidentate ligands and are coordinated to two metal ions favoring the formation of dinuclear complexes.

CC 78-7 (Inorganic Chemicals and Reactions)
 Section cross-reference(s): 75

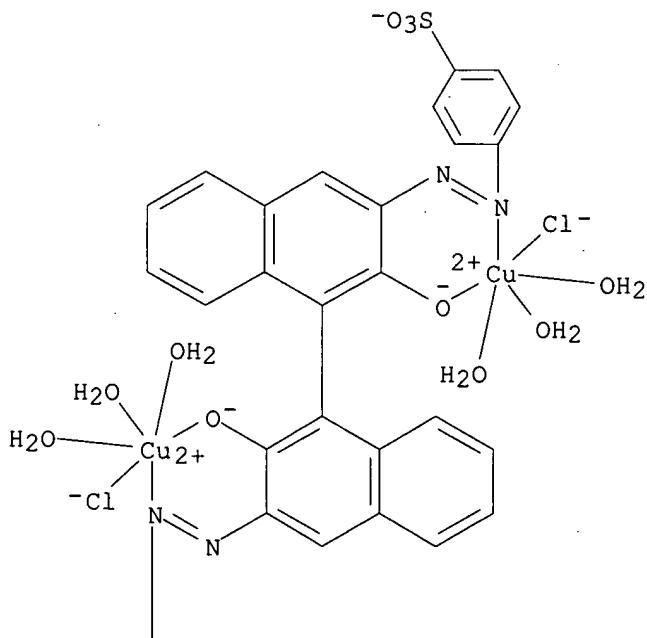
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 329742-83-8P 329742-84-9P 329742-85-0P 329742-86-1P
 329742-87-2P 329742-88-3P 329742-89-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
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 329742-87-2P 329742-89-4P
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 (preparation of)

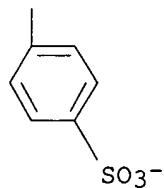
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CN Cuprate(2-), hexaaquadichloro[μ -[[4,4'-[[2,2'-di(hydroxy- κ O)[1,1'-binaphthalene]-3,3'-diyl]bis(azo- κ N1)]bis[benzenesulfonato]](4-)] di-, dihydrogen (9CI) (CA INDEX NAME)

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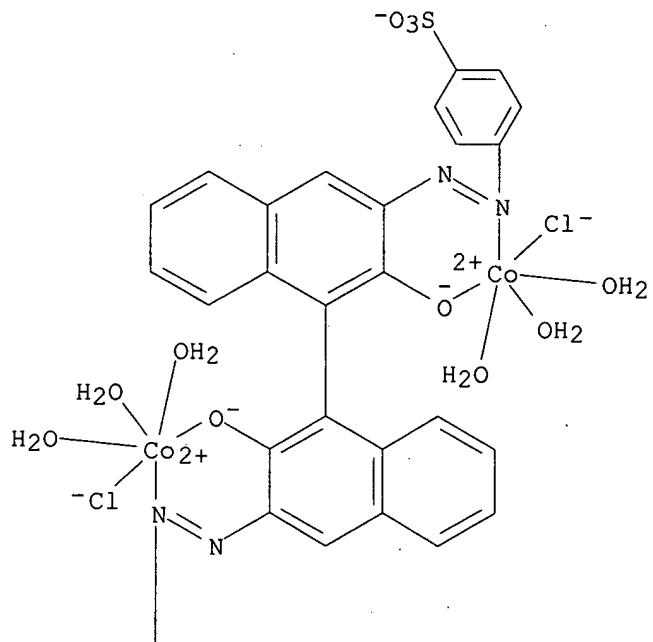


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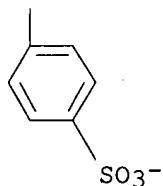
● 2 H^+

RN 329742-77-0 HCPLUS
 CN Cobaltate(2-), hexaaquadichloro[μ -[[4,4'-[[2,2'-di(hydroxy-
 κO)[1,1'-binaphthalene]-3,3'-diyl]bis(azo-
 κN1)]bis[benzenesulfonato]](4-)]di-, dihydrogen (9CI) (CA INDEX
 NAME)

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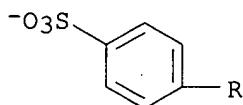
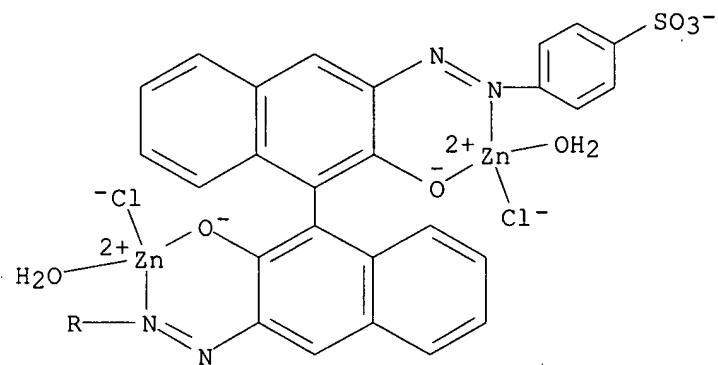
PAGE 2-A

● 2 H^+

RN 329742-79-2 HCPLUS

CN Zincate(2-), diaquadichloro[μ -[[4,4'-[[2,2'-di(hydroxy- κ O)[1,1'-binaphthalene]-3,3'-diyl]bis(azo- κ N1)]bis[benzenesulfonato]](4-)] di-, dihydrogen, tetrahydrate (9CI) (CA INDEX NAME)

PAGE 1-A



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● 2 H^+ ● 4 H_2O

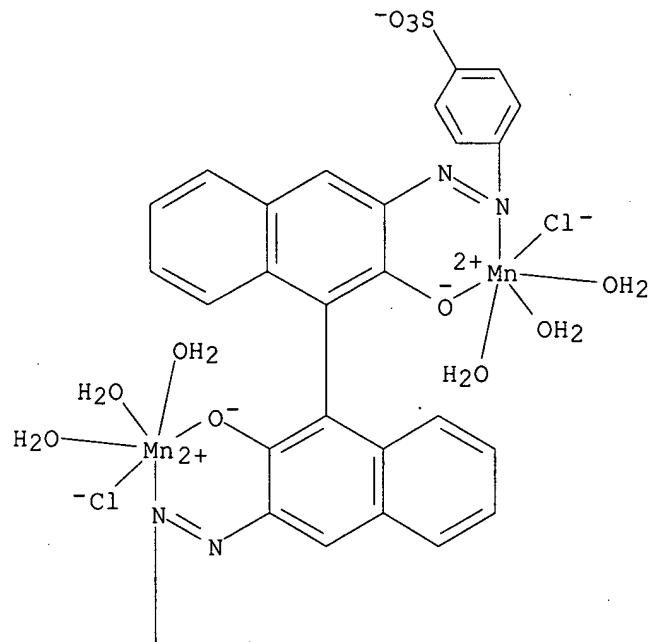
RN 329742-81-6 HCPLUS

CN Manganate(2-), hexaaquadichloro[μ -[[4,4'-[[2,2'-di(hydroxy- κ O)[1,1'-binaphthalene]-3,3'-diyl]bis(azo-

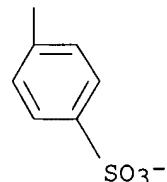
jan delaval - 25 october 2006

$\kappa\text{N}1)]\text{bis}[\text{benzenesulfonato}](4-)]\text{di-}$, dihydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



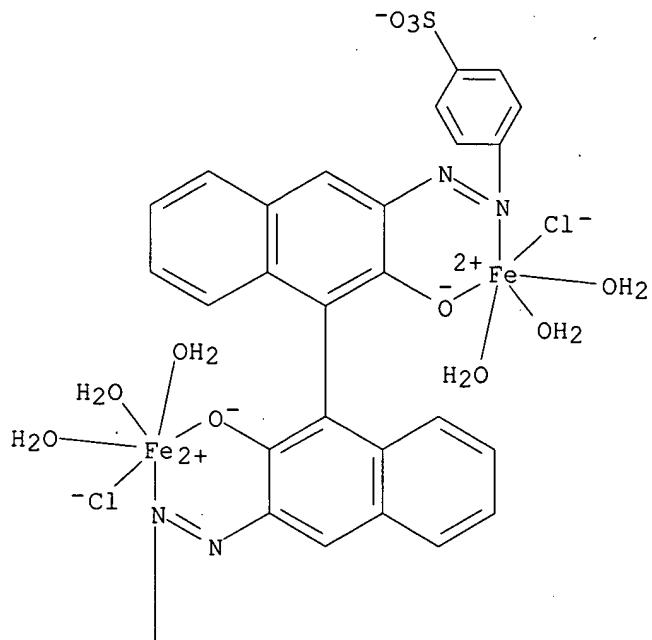
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● 2 H^+

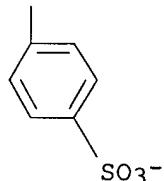
RN 329742-83-8 HCPLUS

CN Ferrate(2-), hexaaqua dichloro[μ -[[4,4'-[[2,2'-di(hydroxy- κO)[1,1'-binaphthalene]-3,3'-diyl]bis(azo- $\kappa\text{N}1)]bis[benzenesulfonato]](4-)]di-, dihydrogen (9CI) (CA INDEX NAME)$

PAGE 1-A



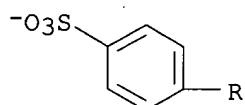
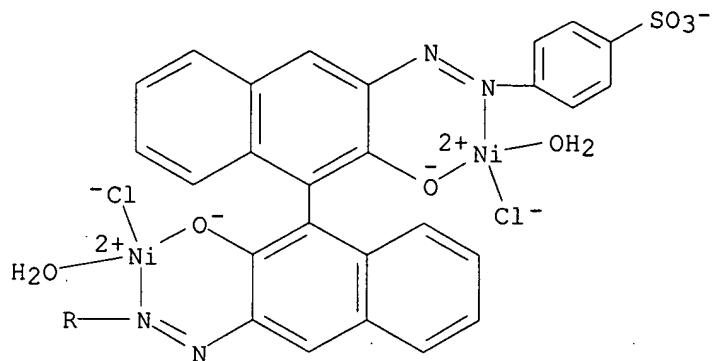
PAGE 2-A

● 2 H⁺

RN 329742-85-0 HCPLUS

CN Nickelate(2-), diaquadichloro[μ-[[4,4'-[[2,2'-di(hydroxy-κO)[1,1'-binaphthalene]-3,3'-diyl]bis(azo-κN1)]bis[benzenesulfonato]](4-)] di-, dihydrogen (9CI) (CA INDEX NAME)

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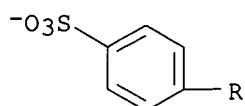
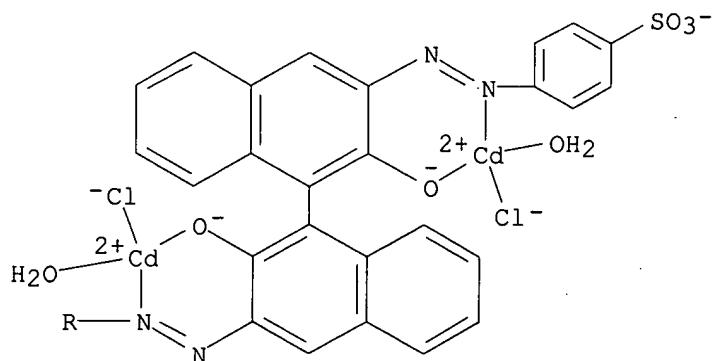
PAGE 2-A

●2 H⁺

RN 329742-87-2 HCPLUS

CN Cadmate(2-), diaquadichloro[μ-[[4,4'-[[2,2'-di(hydroxy-κO)[1,1'-binaphthalene]-3,3'-diyl]bis(azo-κN1)]bis[benzenesulfonato]](4-)] dihydrogen (9CI) (CA INDEX NAME)

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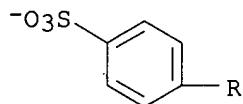
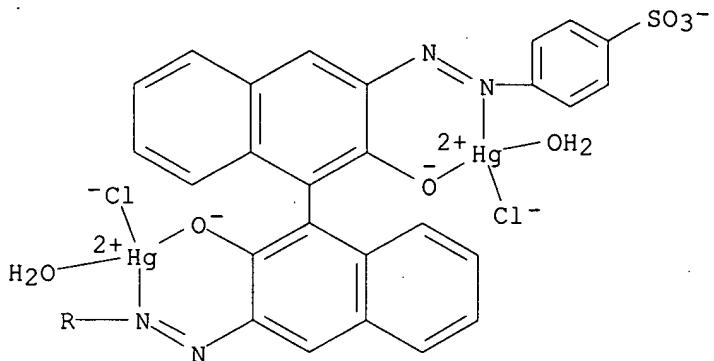
PAGE 2-A

●2 H⁺

RN 329742-89-4 HCPLUS

CN Mercurate(2-), diaquadichloro[μ-[[4,4'-[[2,2'-di(hydroxy-κO)[1,1'-binaphthalene]-3,3'-diyl]bis(azo-κN1)]bis[benzenesulfonato]](4-)]dihydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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●2 H⁺

RETABLE

| Referenced Author (RAU) | Year (R PY) | VOL (R VL) | PG (R PG) | Referenced Work (RWK) | Referenced File |
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| Lever, A | 1960 | 3 | Coord Chem Rev | |
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| Mahapatra, B | 1995 | 72 | J Indian Chem Soc | HCAPLUS |
| Mahapatra, B | 1995 | 72 | J Indian Chem Soc | HCAPLUS |
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| Yamada, S | 1966 | 1 | Coord Chem Rev | HCAPLUS |

L61 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:689212 HCAPLUS

DN 134:125136

TI Polymetallic complexes of cobalt(II), nickel(II), copper(II), zinc(II) cadmium(II) and mercury(II) with bis-bidentate chelating azo dye ligand

AU Mahapatra, B. B.; Mishra, R. R.

CS Post Graduate Department of Chemistry, G. M. Autonomous College, Sambalpur, 768 004, India

SO Ultra Scientist of Physical Sciences (2000), 12(2), 253-255
CODEN: USPSE5

PB Ultra Scientist of Physical Sciences

DT Journal

LA English

OS CASREACT 134:125136

AB [M₂LC₁₂(H₂O)₆] (M = Co, Cu) and [M₂LC₁₂(H₂O)₂] (M = Ni, Zn, Cd, and Hg; H₂L = 3,3'-bis(naphthylazo)-2,2'-dihydroxydinaphthalene, a bis-bidentate chelating azo dye ligand having NO-ON donor atoms) were synthesized. The ligand is bonded to the metal ions through two phenolic and two azo nitrogen atoms. The characterization of the complexes is based upon elemental anal., magnetic moment measurement, conductivity measurement, IR, electronic and NMR spectral data. The Co(II) complex is octahedral, Cu(II) complex distorted octahedral, Ni(II) complex square planner and the Zn(II), Cd(II) and Hg(II) complexes are ascribed to posses tetrahedral stereochem.

CC 78-7 (Inorganic Chemicals and Reactions)

Section cross-reference(s): 25, 41

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321558-39-8P 321558-40-1P 321558-41-2P

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(preparation of)

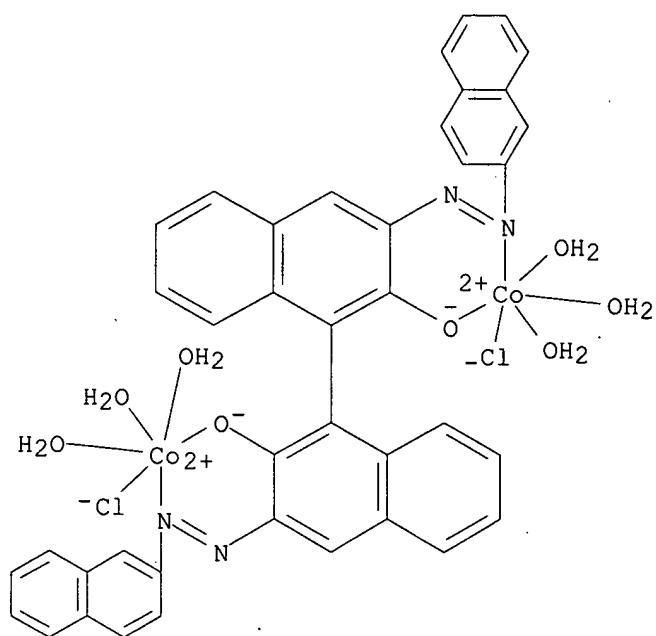
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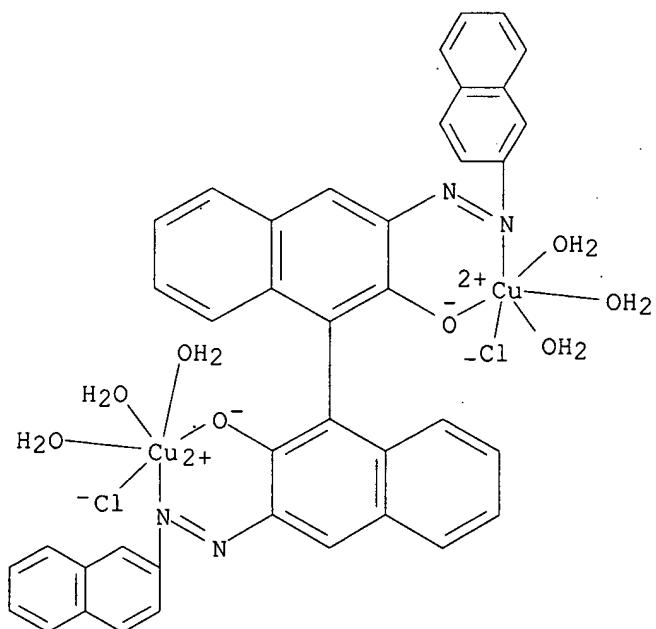
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 321558-33-2 HCAPLUS

CN Cobalt, hexaaqua[μ-[3,3'-bis(2-naphthalenylazo-κN₂)[1,1'-binaphthalene]-2,2'-diolato(2-) -κO:κO']]dichlorodi- (9CI) (CA INDEX NAME)



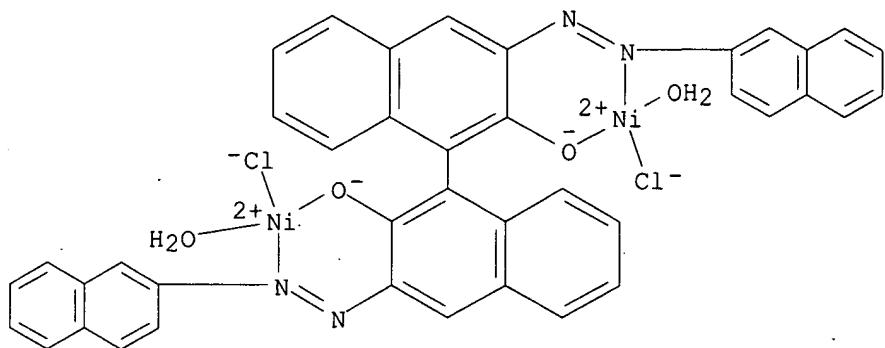
RN 321558-35-4 HCAPLUS

CN Copper, hexaaqua[μ -[3,3'-bis(2-naphthalenylazo- $\kappa\text{N}2$)[1,1'-binaphthalene]-2,2'-diolato(2-)- $\kappa\text{O}:\kappa\text{O}'$]]dichlorodi- (9CI) (CA INDEX NAME)

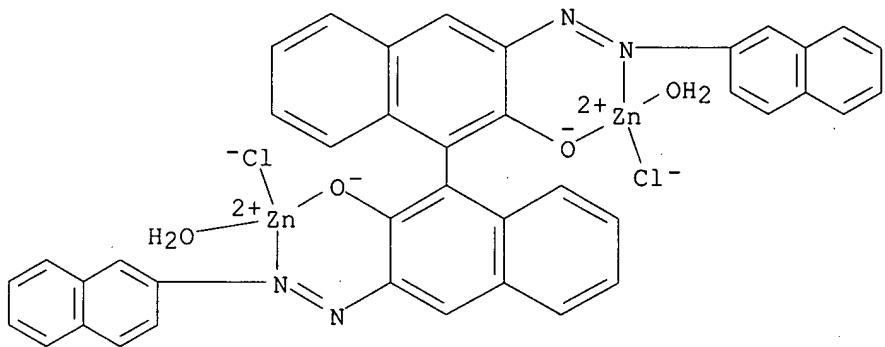
RN 321558-38-7 HCAPLUS

CN Nickel, diaqua[μ -[3,3'-bis(2-naphthalenylazo- $\kappa\text{N}2$)[1,1'-binaphthalene]-2,2'-diolato(2-)- $\kappa\text{O}:\kappa\text{O}'$]]dichlorodi- (9CI) (CA INDEX NAME)

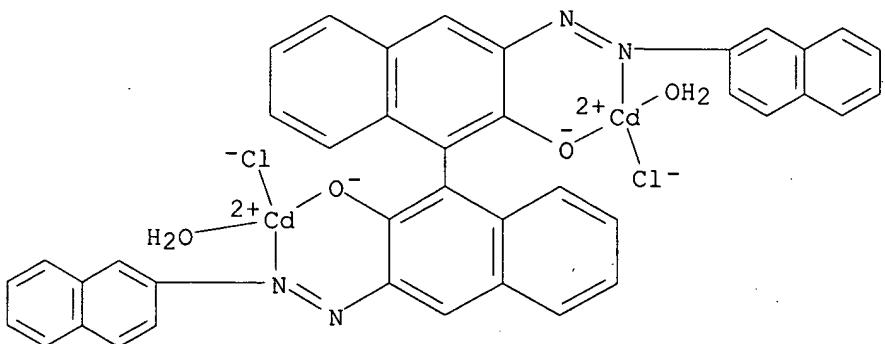
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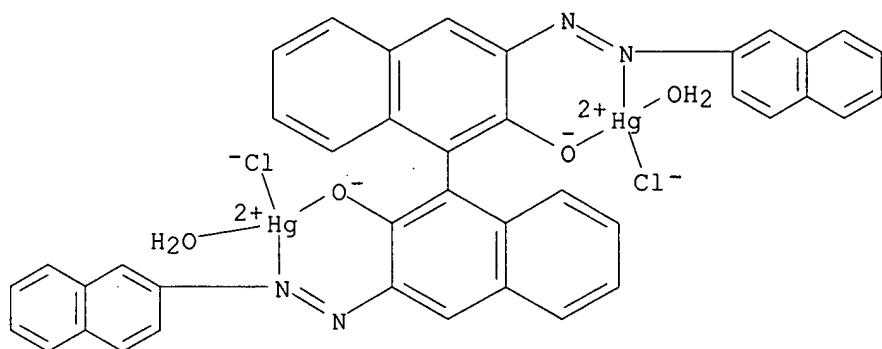
RN 321558-39-8 HCPLUS

CN Zinc, diaqua[μ -[3,3'-bis(2-naphthalenylazo- κ N2)[1,1'-binaphthalene]-2,2'-diolato(2-)- κ O: κ O']]dichlorodi- (9CI) (CA
INDEX NAME)

RN 321558-40-1 HCPLUS

CN Cadmium, diaqua[μ -[3,3'-bis(2-naphthalenylazo- κ N2)[1,1'-binaphthalene]-2,2'-diolato(2-)- κ O: κ O']]dichlorodi- (9CI) (CA
INDEX NAME)

RN 321558-41-2 HCPLUS
 CN Mercury, diaqua[μ-[3,3'-bis(2-naphthalenylazo-κN2)[1,1'-binaphthalene]-2,2'-diolato(2)-κO:κO']]dichlorodi- (9CI) (CA INDEX NAME)



RETABLE

| Referenced Author (RAU) | Year (R PY) | VOL (R VL) | PG (R PG) | Referenced Work (RWK) | Referenced File |
|----------------------------|----------------|---------------|--------------|--------------------------|-----------------|
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| Hathaway, B | 1968 | | 1978 | J Chem Soc A | |
| King, R | 1966 | 5 | 300 | Inorg Chem | HCPLUS |
| Lever, A | 1960 | 3 | 1074 | Coordination Chemist | |
| Mishra, L | 1981 | A28 | 883 | Ind J Chem Soc | |
| Mohapatra, B | 1987 | 124 | 387 | Acta Chem Hung | |
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| Mohapatra, B | 1991 | 68 | 542 | J Ind Chem Soc | |
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| Yamada, S | 1966 | 1 | 415 | Co-ord Chem Rev | HCPLUS |

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E CHOWDHRY M/AU

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E MUBARIK/AU
E MAHMOOD/AU
E MAHMOOD C/AU
E MAHMOOD M/AU

L3 28 S E3
E SCHMID/AU
E SCHMID/AU

L4 9 S E3
E SCHMID M/AU

L5 526 S E3-E15,E30-E32
 E PREISHUBER/AU
 L6 27 S E4,E7-E12
 E PREISHUEBER/AU
 E PFLUGL/AU
 E SAVA/AU
 E SAVA X/AU
 L7 23 S E4
 E WEISS/AU
 L8 17 S E3
 E WEISS H/AU
 L9 624 S E3-E19
 E WEISS HORST/AU
 L10 67 S E3
 E WEISS HOERST/AU
 E MECKING/AU
 L11 95 S E24,E27,E28
 E ZUIDEVELD/AU
 L12 21 S E7-E9
 E BAUERS/AU
 L13 18 S E5-E7
 L14 63 S L2-L13 AND BASF?/PA,CS
 E GROUP VII/CT
 E E16+ALL
 L15 8085 S E13+OLD,NT
 E GROUP VIII/CT
 E E35+ALL
 L16 172470 S E13+OLD,NT
 E GROUP VII/CT
 L17 1124 S GROUP VIIB?/CT
 L18 7115 S GROUP VIII?/CT
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